Scope of Work

Date: February 1, 2007

Contract No. _____

Project Title: Bay Area Freeway Corridor Planning and Analysis Template

I. PROJECT GOAL/DESCRIPTION

The goal of this project is to improve freeway corridor management planning and to develop and test a standard corridor planning template for use by staff of the California Department of Transportation (Caltrans) as well as regional and local agencies. Corridor management is a process for effective decision making that incorporates systematic study procedures to:

- assess transportation deficiencies
- identify options to address the deficiencies
- evaluate the options in a comprehensive manner.

The corridor to be studied is Highway 580 (including Highway 238) from Highway 880 in San Leandro to Highway 205 in Tracy. Additional corridor(s) will be identified later based on Caltrans' input and priorities.

Additionally, performance outcomes and financial feasibility are significant factors in the application of the corridor management process. The objective is to maximize the effective use of the available financial resources in meeting the transportation needs and to minimize the impacts (broadly defined) of the implemented transportation improvements.

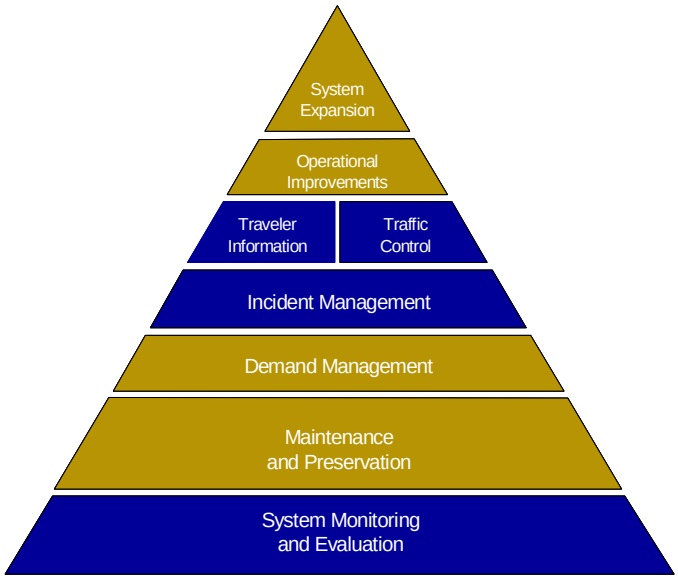
The project will achieve this goal through extensive and reiterative analysis of proven transportation management systems and techniques. The full incorporation of operational strategies into freeway corridor plans will be accomplished by utilizing the expertise of experts in the field of simulation, modeling, planning, traffic and innovative transportation deployment. From this rigorous set of demonstrations, an effective user friendly template or management guide for model corridor management planning will be developed.

II. SCOPE OF SERVICES

BACKGROUND

Caltrans has been developing system management strategies for several years in consultation with regional and local agencies, with the aim of managing the state highway system and adjacent major local arterials

more efficiently. System monitoring and evaluation are the foundation for sound system management as depicted in the following chart.



The Caltrans planning and operations functions, working together, rely on monitoring and evaluation to identify the optimum strategies to improve the transportation system. These strategies range from maintenance and preservation to system expansion.

Caltrans has designated certain corridors for aggressive implementation of ITS strategies such as traffic control (freeway ramp metering & arterial signalization), traveler information, and incident management. These strategies will complement other improvements such as transit and rail, maintaining state and local agency roadways, and some highway capacity improvements in order to provide the multi-faceted approach needed for sound system management.

The plan developed from this effort will serve as a standard template or best practices for use on other corridors as they become ready for the implementation of system management strategies.

List of Tasks

The tasks listed herein are to be the responsibility of Metropolitan Transportation Commission (MTC) and will be performed by its staff or a consultant as subcontractors to MTC. If the services of a private consultant are to be used, Caltrans shall be involved in the consultant selection panel.

1. Corridor Study Initiation

1.1 MTC in cooperation with the California Department of Transportation (Caltrans) will prepare and distribute a Request For Qualifications (RFQ) to solicit consultants to conduct the analysis and other tasks contained herein. MTC will perform all RFQ and contract related functions in accordance with all laws, policy and requirements. MTC will draft the contract documents and manage all aspects of the consultant contract. As an alternative, MTC may choose to amend existing contracts to accomplish the desired tasks. MTC will organize an interview and consultant selection panel to evaluate and select the consultant to perform the work of this project. The panel will consist at a minimum of representatives from MTC, Caltrans District 4 Planning and Traffic Operations, and/or Caltrans Headquarters Planning and Traffic Operations. Other panel members may be added as appropriate to achieving the objectives of the effort.

1.2 At the beginning of the project, consultant will meet with MTC Project Manager and Caltrans staff to discuss overall study scope which may include all or some of the following tasks, and review available information and data.

1.3 Study Kick-Off Meeting – Consultant will schedule a meeting with the MTC Project Manager or designated representative, key MTC staff, Caltrans District 4 Planning and Traffic Operations, and/ or Caltrans Headquarters Planning and Traffic Operations, and representatives from other involved agencies to kick off the corridor analysis; establish communication channels, protocols, and data & information sources; discuss the scope of work, schedule, and budget; and obtain a thorough understanding of the goals for the study. Specific topics to discuss include, traffic studies of the corridor that have been recently completed or are underway, availability of traffic data, and congestion relief projects and strategies that have already been programmed or recommended.

1.4 A corridor development team should be established for the corridor. At a minimum, the team should be comprised of representatives of MTC, Caltrans District 4 and Headquarters Planning and Traffic Operations, and cities, and counties as appropriate. Additional team members may be added depending on the specific, significant issues encountered in the selected corridor(s).

1.5 Preparation of Detailed Workscope, Schedule, and Budget – Consultant will prepare a detailed workscope, schedule, and budget for review and approval by the MTC Project Manager and other involved agencies.

Consultant will finalize the detailed workscope, schedule and budget based on comments received from the MTC Project Manager and other involved agencies.

Deliverable 1: Draft and Final Detailed Workscope, Schedule, and Budget

2. Analysis of Existing Conditions

MTC and the selected consultant will collect and analyze all information necessary to thoroughly understand existing traffic conditions in the study area and be able to identify specific causes of problems. It is expected that most of the data to be used for the corridor analyses will be compiled from existing sources. Additional data collection may be conducted at the direction or approval of the MTC Project Manager.

2.1 Information and Data Collection – MTC and the selected consultant will gather data on existing conditions and information from recent studies including, but not limited to, the following:

2.1.1. MTC and the selected consultant will gather data on the existing physical infrastructure needed to assess the existing vehicular and person-carrying capacities of all modes within the study corridor. This data shall include, but is not limited to, number of lanes on the freeway and parallel arterials, basic geometric information such as lane and shoulder widths, transit service, and configurations of key intersections on parallel arterials.

2.1.2. MTC and the selected consultant will gather information on existing traffic performance data for all modes within the study corridor including, but not limited to, peak period traffic volumes on the freeway and parallel arterials, vehicle occupancies, truck percentages, transit ridership, congestion data, delay data, travel time data, and accident and incident data.

2.1.3. MTC and the selected consultant shall review relevant Caltrans documents, regional and local planning documents to assess the state of practice in corridor planning and management and establish a corridor management baseline. This shall include the guidance documents prepared by the Division of Transportation Planning, the Division of Traffic Operations, and the appropriate Caltrans districts. MTC and the selected consultant shall review transportation concept reports, corridor studies, project study reports and other relevant Caltrans documents pertaining to the study corridor.

2.1.4. MTC and the selected consultant will conduct at least one (1) field review of each travel mode within the study corridor.

2.1.5. Traffic data is used to calibrate traffic simulation models according to calibration criteria defined by generally accepted best practices.

2.2 Analysis of Existing Conditions – MTC and the selected consultant will analyze the data obtained from Task 2.1 as follows:

2.2.1 Through a review and analysis of the traffic data and confirmed by field observations, MTC and the selected consultant will determine causes of existing ***recurrent*** traffic congestion problems in the corridor. Locations of freeway bottlenecks will be identified, as well as other locations that may constitute mobility constraints in the corridor, such as freeway ramps or arterial intersections.

2.2.2 MTC and the selected consultant will review data on incidents and accidents in the corridor to determine where, if any, concentrations of these events occur in the corridor, and to quantify the magnitude of ***non-recurrent*** congestion in the corridor.

2.2.3 Consultant will summarize the results of the existing conditions analyses in an Existing Conditions Technical (ECT) memorandum. At a minimum, the ECT memo will include: a description of the roadway and transit network, including a map showing the corridor study network, and a detailed description of existing traffic performance on the corridor with specific explanations of the causes of congestion problems. Consultant will provide a draft ECT memo to the MTC Project Manger and will finalize the ECT memo based on comments received from the MTC Project Manager and other involved agencies.

Deliverable 2:	Draft and Final ECT Memorandum summarizing the information and data collected for the corridor. The ECT Memo shall include a narrative describing major traffic issues and causes.

3. Development of Potential Congestion Mitigation Strategies and Projects

3.1 Consultant will, in consultation with the MTC Project Manager and other involved agencies, develop a group of viable congestion relief measures for the corridor. These measures may range from system management measures to maximize efficient use of the existing capacity within the corridor to more traditional capital improvements to increase corridor capacity. The proposed projects will be segregated into short-term and long-term implementation timelines. The primary focus of the projects

will be on the freeway, but may also include improvements on other modes or on parallel arterials.

3.2 Consultant will, in consultation with the MTC Project Manager and other involved agencies, develop a list of performance measures appropriate for the corridor being analyzed.

3.3 MTC and the selected consultant will prepare planning-level cost estimates for proposed projects that do not already have more detailed cost estimates developed.

3.4 Consultant will finalize the list of strategies and projects based on comments received from the MTC Project Manager and other involved agencies.

Deliverable 3: Draft and Final Technical Memorandum summarizing the mitigation strategies and projects that will be analyzed in Task 4.

4. Analysis of Potential Congestion Mitigation Strategies and Projects

In consultation with the MTC Project Manager, consultant will evaluate the potential congestion mitigation strategies and projects as follows:

4.1 MTC and the selected consultant shall review relevant methodologies and tools to assess system management strategies, including but not limited to, models, simulations, or other calculations necessary to identify, characterize, and quantify operational improvements and system management strategies. MTC and the selected consultant shall, with input from the management team, identify which methodologies are most appropriate to use, the data needs to support the selected methodologies and tools. Analysis techniques should be able to consider a variety of system management operational applications and techniques, including, but not limited to, ramp metering strategies, incident response, incident prevention, auxiliary lanes, bottleneck removal, traveler information systems/strategies, construction zone management, traffic signal system management.

4.2 MTC and the selected consultant will conduct an analysis of the effect of the proposed mitigation measures on traffic congestion in the corridor. Quantitative measures to be documented in the study include, but are not limited to, locations of freeway bottlenecks, changes in aggregate congestion levels in the corridor, changes in peak period travel times and delays. Level of service assessment of traffic conditions will not be considered adequate.

4.3 Consultant will develop a prioritized list of recommended measures, including a narrative explaining the rationale for the prioritization. In

addition, recommendations for revisions or adjustments to any of the measures should be identified. Consultant will finalize the list based on comments received from the MTC Project Manager and other involved agencies.

Deliverable 4A:	Compilation of operational analysis technical data, in both printed form and electronic word/excel format.
Deliverable 4B:	Draft and final Technical Memorandum summarizing the results of the traffic operations analysis, a prioritized list of congestion relief measures, including recommendations for any modifications to proposed projects and strategies.

5. Development of Corridor Planning and Analysis Template

MTC and the selected consultant shall develop a Model Corridor Management Plan that will be a standard template or best practices document for use on other corridors in the MTC region. The Model Plan shall be based on the experience and insights gained through the development of the specific corridor plans by means of the previous tasks.

Deliverable 5:	Model Corridor Management Plan

III. REPORTS AND/OR MEETINGS

A. MTC shall submit progress reports in accordance with the following schedule.

B. MTC's Project Manager shall meet with the State's Contract Manager or Contract Monitor as needed to discuss progress on the project(s).

C. Each quarter, MTC agrees to provide Caltrans with a quarterly progress report signed by the Project Manager and a quarterly financial report which includes a schedule of disbursements signed by the Project Manager or his designated representative in accordance with Exhibit B – Budget Detail and Payment Provisions, of this Interagency Agreement.

D. MTC must provide timely reports to Caltrans and the corridor development teams. At a minimum, MTC shall submit the following reports:

1. Four printed copies of the quarterly progress report on or before the first of each January, April, July, and October during the period in which the project is being performed.

2. One printed copy of the quarterly financial report on or before the fifteenth (15^{th}) of each January, April, July, and October during the period in which the project is being performed.

3. Three copies of the final report on the work authorized under this Agreement on or before the end date of the Agreement. Two copies of a draft final report will be submitted to Caltrans for review and comment sixty (60) days before the final report is printed.

E. Copies of all invoices, quarterly financial reports, quarterly progress reports relating to this project, and any required supporting documentation shall be sent to:

Juliana Gum
Department of Transportation
Traffic Operations MS 5
111 Grand Avenue
Oakland, CA 94612
Public Telephone: (510) 286 - 4579
Calnet Telephone: (8) 541- 4579
Facsimile: (510) 286 - 4561

F. When the Task Order calls for a product or a report, Caltrans agrees to notify MTC within forty-five (60) calendar days of receipt of the product or report that it is unacceptable. If MTC receives no such notification, it will assume that the product or report is acceptable.

IV. PERIOD OF PERFORMANCE

Work under this Task Order shall begin on 2/1/2007 and terminate on 12/31/2007. Funding will not exceed $1,500,000.00.

V. PROJECT SCHEDULE

Proposed Schedule

List of Tasks	Start Date	End Date
1. Final Detailed Workscope, Schedule and Budget (Deliverable #1)	2/1/2007	2/28/2007
2. Memo summarizing the information and data collected for the corridor (Deliverable #2)	3/1/2007	3/31/2007
3. Memo summarizing the mitigation strategies and projects (Deliverable #3)	4/1/2007	4/30/2007
4. Compilation of operational analysis technical data (Deliverable #4A)	5/1/2007	7/31/2007
4. Memo summarizing the results of the traffic operations analysis (Deliverable #4B)	8/1/2007	10/31/2007
5. Model Corridor Management Plan (Deliverable #5)	11/1/2007	12/31/2007

VI. BUDGET

List of Tasks	Budget Amount
1. Final Detailed Workscope, Schedule and Budget (Deliverable #1)	$ 75,000
2. Memo summarizing the information and data collected for the corridor (Deliverable #2)	$ 150,000
3. Memo summarizing the mitigation strategies and projects (Deliverable #3)	$ 150,000
4. Compilation of operational analysis technical data (Deliverable #4A)	$ 450,000
4. Memo summarizing the results of the traffic operations analysis (Deliverable #4B)	$ 525,000
5. Model Corridor Management Plan (Deliverable #5)	$ 150,000